CLAIMS

1. A method for determining paths between a start node and an end node of a communication network, the communication network being formed of sub-networks, the sub-networks having connectors and segments, the segments interconnecting various ones of the connectors, the start node corresponding to one of the connectors and the end node corresponding to another of the connectors, said method comprising:

receiving information corresponding to the start node and the end node;

receiving information corresponding to a type of path of interest;

receiving information corresponding to a type of connector of interest; and

determining a path between the start node and the end node based upon the type of path of interest and the type of connector of interest.

2. The method of claim 1, wherein receiving information corresponding to a type of path of interest comprises receiving information corresponding to at least one of: all paths between the start node and the end node, and a shortest path between the start node and the end node.

3. The method of claim 1, wherein each of the sub-networks has at least one level 2 connector, each of the sub-networks being configured to intercommunicate with another of the sub-networks via a level 3 connector, and wherein receiving information corresponding to a type of connector of interest comprises receiving information corresponding to at least one of: level 2 and level 3 connectors, and level 3 connectors.

4. The method of claim 3, wherein, when the type of connectors of interest are level 3 connectors, determining a path between the start node and the end node comprises:

identifying sub-networks associated with the start node; and

determining whether the end node is associated with at least one of the identified sub-networks.

5. The method of claim 3, wherein, when the type of connectors of interest are level 2 and level 3 connectors, determining a path between the start node and the end node comprises:

identifying segments associated with the start node; and

determining whether the end node is associated with at least one of the identified segments.

6. The method of claim 4, further comprising:

if the end node is not associated with at least one of the identified sub-networks, recursively identifying sub-networks associated with the each of the previously identified sub-networks; and

determining whether the end node is associated with at least one of the sub-networks associated with the each of the previously identified sub-networks.

7. The method of claim 5, further comprising:

if the end node is not associated with at least one of the identified segments, recursively identifying segments associated with the each of the previously identified segments; and

determining whether the end node is associated with at least one of the segments associated with the each of the previously identified segments.

8. The method of claim 2, wherein determining a path between the start node and the end node comprises:

storing a shortest path between the start node and the end node in memory as a current shortest path; and

if the type of path of interest is the shortest path between the start node and the end node, recursively determining paths between the start node and the end node based upon the type of connector of interest such that, when a newly determined path between the start node and the end node is shorter than the current shortest path, the current shortest path is replaced with the newly determined path.

9. A system for determining paths between a start node and an end node of a communication network, the communication network being formed of sub-networks, the sub-networks having connectors and segments, the segments interconnecting various ones of the connectors, the start node corresponding to one of the connectors and the end node corresponding to another of the connectors, said system comprising:

a processor;

a discovery mechanism associated with said processor, said discovery mechanism configured to generate and store topology data specifying connectors and segments of a communication network; and

a layout mechanism associated with said processor and interfaced with said discovery mechanism, said layout mechanism configured to receive said topology data from said discovery mechanism, said layout mechanism configured to drive a display based upon said topology data,

said discovery mechanism being configured to determine a path between a start node and an end node based upon said topology data.

10. The system of claim 9, wherein said discovery mechanism has a probable path mechanism configured to determine a path between the start node and the end node based upon said topology data.

11. The system of claim 9, wherein said discovery mechanism has means for determining a path between the start node and the end node based upon said topology data.

12. The system of claim 10, wherein said layout mechanism has a translator configured to convert topology data to map data, and wherein said probable path mechanism information corresponding to a path between the start node and the end node to said translator.

13. The system of claim 10, wherein said probable path mechanism is configured to receive information corresponding to a type of path of interest, receive information corresponding to a type of connector of interest, and determine a path between the start node and the end node based upon said type of path of interest and said type of connector of interest.

14. A computer readable medium having a computer program for determining paths between a start node and an end node of a communication network, the communication network being formed of sub-networks, the sub-networks having connectors and segments, the segments interconnecting various ones of the connectors, the start node corresponding to one of the connectors and the end node corresponding to another of the connectors, said computer readable medium comprising:

logic configured to receive information corresponding to the start node and the end node;

logic configured to receive information corresponding to a type of path of interest;

logic configured to receive information corresponding to a type of connector of interest; and

logic configured to determine a path between the start node and the end node based upon the type of path of interest and the type of connector of interest.

15. The computer readable medium of claim 14, wherein the logic configured to receive information corresponding to a type of path of interest comprises logic configured to receive information corresponding to at least one of: all paths between the start node and the end node, and a shortest path between the start node and the end node.

16. The computer readable medium of claim 14, wherein each of the sub-networks has at least one level 2 connector, each of the sub-networks being configured to intercommunicate with another of the sub-networks via a level 3 connector, and wherein the logic configured to receive information corresponding to a type of connector of interest comprises logic configured to receive information corresponding to at least one of: level 2 and level 3 connectors, and level 3 connectors.

17. The computer readable medium of claim 16, wherein the logic configured to determine a path between the start node and the end node comprises:

logic configured to identify sub-networks associated with the start node; and

logic configured to determine whether the end node is associated with at least one of the identified sub-networks.

18. The computer readable medium of claim 16, wherein the logic configured to determine a path between the start node and the end node comprises:

logic configured to identify segments associated with the start node; and

logic configured to determine whether the end node is associated with at least one of the identified segments.